# **PATENT APPLICATION**

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Yoshiro SHIOKAWA, Megumi NAKAMURA, Tohru SASAKI and Toshihiro FUJII

Application No.: New US Patent Application

Filed: June 1, 2001 Docket No.: 109675

For: METHOD AND APPARATUS FOR ION ATTACHMENT MASS SPECTROMETRY

# PRELIMINARY AMENDMENT

Director of the U.S. Patent and Trademark Office Washington, D. C. 20231

Sir:

Prior to initial examination, please amend the above-identified application as follows: Please replace claims 3, 4, 8 and 12 as follows:

- 3. (Amended) A method of ion attachment mass spectrometry as set forth in claim 1, wherein a quantitative value is calculated for said each component using sensitivity corresponding to the total pressure during measurement.
- 4. (Amended) A method of ion attachment mass spectrometry as set forth in claim 1, wherein the total pressure during the measurement is set within an allowable fluctuation of total pressure.
- 8. (Amended) An apparatus for ion attachment mass spectrometry as set forth in claim 6, further provided between said reaction chamber and said analysis chamber with a differential evacuation chamber of a reduced pressure atmosphere for connecting said two chambers in a vacuum state.

12. (Amended) An apparatus for ion attachment mass spectrometry as set forth in claim 10, wherein

the allowable fluctuation of total pressure is calculated from a rate of change of sensitivity corresponding to the total pressure of said reduced pressure atmosphere during the measurement and a required quantitative error value.

Please add new claims 13-16 as follows:

- --13. A method of ion attachment mass spectrometry as set forth in claim 2, wherein a quantitative value is calculated for said each component using sensitivity corresponding to the total pressure during measurement.--
- --14. A method of ion attachment mass spectrometry as set forth in claim 2, wherein the total pressure during the measurement is set within an allowable fluctuation of total pressure.--
- --15. An apparatus for ion attachment mass spectrometry as set forth in claim 7, further provided between said reaction chamber and said analysis chamber with a differential evacuation chamber of a reduced pressure atmosphere for connecting said two chambers in a vacuum state.--
- --16. An apparatus for ion attachment mass spectrometry as set forth in claim 11, wherein

the allowable fluctuation of total pressure is calculated from a rate of change of sensitivity corresponding to the total pressure of said reduced pressure atmosphere during the measurement and a required quantitative error value.--

#### REMARKS

Claims 1-16 are pending. Claims 3, 4, 8 and 12 are amended to eliminate multiple dependencies and claims 13-16 are added to compensate for subject matter deleted from

multiple dependent claims 3, 4, 8 and 12. Prompt and favorable consideration on the merits is respectfully requested.

The attached Appendix includes marked-up copies of each rewritten claim (37 C.F.R. 1.121(c)(1)(ii)).

Respectfully submitted,

James A. Oliff Registration No. 27,075

Joel S. Armstrong Registration No. 36,430

JAO:JSA/zmc

Attached:

**APPENDIX** 

Date: June 1, 2001

OLIFF & BERRIDGE, PLC P.O. Box 19928 Alexandria, Virginia 22320 Telephone: (703) 836-6400 DEPOSIT ACCOUNT USE
AUTHORIZATION
Please grant any extension
necessary for entry;
Charge any fee due to our
Deposit Account No. 15-0461

#### **APPENDIX**

Changes to Claims:

Claims 13-16 are added.

The following are marked-up versions of the amended claims:

- 3. (Amended) A method of ion attachment mass spectrometry as set forth in claim 1 or 2, wherein a quantitative value is calculated for said each component using sensitivity corresponding to the total pressure during measurement.
- 4. (Amended) A method of ion attachment mass spectrometry as set forth in claim 1 or 2, wherein the total pressure during the measurement is set within an allowable fluctuation of total pressure.
- 8. (Amended) An apparatus for ion attachment mass spectrometry as set forth in claim 6 or 7, further provided between said reaction chamber and said analysis chamber with a differential evacuation chamber of a reduced pressure atmosphere for connecting said two chambers in a vacuum state.
- 12. (Amended) An apparatus for ion attachment mass spectrometry as set forth in claim 10-or 11, wherein

the allowable fluctuation of total pressure is calculated from a rate of change of sensitivity corresponding to the total pressure of said reduced pressure atmosphere during the measurement and a required quantitative error value.